

SCIENCE & GOVERNMENT REPORT

13th Year of Publication

The Independent Bulletin of Science Policy

Volume XIII, Number 4

P.O. Box 6226A, Washington, D.C. 20015

March 1, 1983

Congress Smiles on Big R&D Budget, But...

Washington's raging new adulation of science and technology as the key to economic resurrection assured a deferential reception for the Administration's research and development plans when they were reviewed on February 18 by the Senate Budget Committee. As a tipoff of things to come, however, it should be noted that the ranking Democrat on that strategically situated Committee, Senator Lawton Chiles, of Florida, expressed doubts about the strong tilt toward military R&D in the fiscal 1984 budget.

With George A. Keyworth, the President's Science Adviser, in the witness chair, Chiles cordially seconded Committee Chairman Pete V. Domenici (R-NM) in praising the overall boost for R&D (SGR Vol. XIII, No. 3). But then, echoing a dissent that's increasingly heard on Capitol Hill, he said, "Yet, lest we get carried away

High-Energy Warriors Get a Stern Warning—Page 3

with this improvement, a closer examination reveals a deeply disturbing trend. Outlays for non-military research and development have dropped steadily since 1981. The President's budget request for FY 1984 is \$5 billion lower than we spent for such research in 1981. In that same period," Chiles continued, "military research has increased by more than 68 percent, a rise of nearly \$12 billion."

Taking up the increasingly popular theme of R&D and international economic competition, Chiles observed that "among our chief international competitors, the United States ranks low in terms of total civilian research and development as a portion of gross national product. West Germany spends about 2.2 percent of GNP on civilian research, both public and private, and Japan just under 2 percent. The United States, meanwhile, spends less than 1.8 percent. Yet these are the very countries with which we must compete aggressively."

Under questioning by Chiles, Keyworth acknowledged that while defense R&D would rise by 29 percent in the President's proposed budget, overall funds for civilian R&D would remain unchanged. But he insisted that this is a case in which less is more, since "there is an emphasis on basic research and the training of new talent and a compensatory decrease in civilian demonstration and near-term technology development projects that we feel are appropriate for the private sector."

Chiles then asked why budget projections for the next three years showed annual increases for defense research and no change for the supposedly favored National Science Foundation. Keyworth, who has developed into an adept witness-chair performer during his two years in Washington, could offer no plausible response to that simple question, but did manage to go on at length about the military deficiencies that the Reagan Administration encountered upon taking office.

As for Chairman Domenici, he was upbeat about where we are and where we are going in R&D. Cheerfully quoting an out-of-date NSF report, he said that "the United States spends more money annually on R&D activities than any other nation and more than twice the amount spent by the other western countries and Japan combined." Nonetheless, though he chairs a Committee that's responsible for controlling spending, he announced that "by increasing funding for basic research, targeting increases toward recognized problem areas, and recommending the commencement of new

(Continued on page 2)

In Brief

That token increase proposed for NIH in FY '84—a mere \$71 million atop its current budget of \$4 billion—was part of a last-minute, deficit-inspired cutback that the Administration ordered shortly before the budget books went to press. The softly spoken word in biomedical-policy circles is that the White House will tolerate a much larger increase and that the Congress will surely provide it.

The budget table that's drawing a lot of attention on Capitol Hill is "Trends in Conduct of R&D," which appears in the Special Analysis volume of the budget. Comparing defense and "all other" federal support of R&D from 1953 through the President's proposals for 1984, it shows that the division was roughly 50-50 from 1965, when they were at \$7 billion apiece, to 1981, when they were both around \$17 billion. Under Reagan, "all other" has been held to \$14 billion since 1982, and remains budgeted for that next year. Meanwhile, defense R&D would rise to \$31 billion—Congress willing, which it doesn't appear to be.

The More Things Change...NSF's latest rundown on the distribution of federal R&D funds (*Federal Funds for R&D: 1980-82*) notes that 20 states received 80 percent of the total in 1980 and that "Virtually the same pattern persisted throughout the 1969-80 period."

Ag Research Announces Long-Range Plan

Responding to a barrage of criticism from the White House and Congress, the Department of Agriculture has announced a reshuffling of research priorities at the Agricultural Research Service.

But whatever is to be done will not happen quickly, nor does the plan call for anything resembling the extensive shakeups recommended last year by a White-House-sponsored study or in reports by the Office of Technology Assessment and the General Accounting Office (SGR Vol. XII, No. 14). Nonetheless, the plan, which calls for "redirecting" about \$75 million of an assumed constant-dollar annual budget of \$413 million over the next six years, represents an unusual degree of motion at the much-assailed ARS. And the reaction among Washington's agriculture R&D observers is generally favorable.

BUDGET (Continued from page 1)

scientific projects, we will be moving in the right direction."

Keyworth added little to what he had said about the R&D budget on previous occasions, but he did provide an interesting new observation about the traditional process of applying for research funds. Asked by the Committee to explain NSF's new program for joint federal-industrial provision of research funds for young academics, Keyworth said it would employ relatively simple administrative processes. The awardees, he said, "would not have to go through the occasionally demeaning, occasionally complex grant-acquisition process. They will receive awards based on their personal excellence." Keyworth said the program would provide 200 5-year awards annually and would eventually enroll a total of 1000 recipients, with research support of up to \$100,000 a year.

In a prepared statement that he skipped through to save time, Keyworth assured the Committee that the Administration's research program "responds to intellectual opportunity and long-term relevance to industrial needs." He said—as he has on other occasions—that "It's decidedly not science for science's sake."

As outlined at a press conference by ARS Chief Terry B. Kinney Jr., the aim is to phase in a series of priority shifts so that by 1990, the following ups and downs will have taken place:

An additional \$10 million for R&D on commodity conversion; \$6 million more for soil and water resources; \$14 million more for human nutrition studies, and a \$3-million increase for systems research on agriculture. On the down side, the ARS plans a \$29-million cut in R&D on plant production, and a \$4-million reduction in the animal production category.

In response to a question, Kinney said the shifts would not affect employment levels at the ARS labs.

In the context of the criticism that has been heaped on agricultural research for allegedly neglecting long-term strategy, the design announced by Kinney—under the title *Agricultural Research Service Program Plan*—ought to satisfy the skeptics. Though subtitled *6-Year Implementation Plan 1984-1990*, it perhaps breaks new ground in the history of research planning by adopting what it describes as a "long-term view" of 20 to 50 years.

The six-year plan, the document explains, assumes that ARS will have to work with "finite resources." However, with a demonstration of optimism unique in presentday Washington, the 20-50-year plan proceeds from the assumption that "funds would be unlimited."

However, just looking to the short term, the ARS says it will follow a strategy that calls for a strong emphasis on "mission-oriented fundamental research" of a "high-risk" nature; an increased emphasis on "integrative systems research," because of a need for "New management systems and models that account for interactions among components of complex agricultural systems and that accurately predict the consequences of alternative decisions"; and, finally, research aimed at increasing farming efficiency, reducing the use of non-renewable resources, and raising the value of farm products.

Kinney said that he felt confident that the plan is responsive to the major criticisms inflicted on ARS in

(Continued on page 3)

©Science & Government Report, Inc., 1983

ISSN 0048-9581

Editor and Publisher
Daniel S. Greenberg

Associate Publisher
Wanda J. Reif

Circulation Manager
Diane Kupelian

Contributing Correspondents

Christopher Joyce, Kim A. McDonald (Washington); Francois Seguer (Paris); Ros Herman (London)

Independently published by *Science & Government Report, Inc.*, twice monthly, except in January, July & August. Annual subscription: Institutions, \$132.50 (two years, \$235.00). Information about bulk and individual rates upon request. Editorial offices at 3736 Kanawha St. N.W., Washington, DC 20015. Tel. (202) 244-4135. Second-class postage at Washington, DC. Please address all subscription correspondence to Box 6226A, Northwest Station, Washington, DC 20015. Reproduction without permission is prohibited. SGR is available on Xerox University Microfilms. Claims for missing back issues will be filled without charge if made within six months of publication date.

...Nutrition Research to Be Emphasized

(Continued from page 2)

recent years. He explained, however, that the presentation to the press was the first time out for the plan, and that it had not been reviewed by the Office of Management and Budget, the White House Science Office, or any part of the Congress.

The need for a long-term strategy, he said, arises from new and promising scientific and technical developments at a time when farming is under severe economic distress from the high costs of production. The critical studies by the Office of Technology Assessment and others "gave us a strong signal that it would be to our advantage to take a hard look at our total program."

On specific parts of the program, Kinney said ARS would be emphasizing nutrition research in the newly completed facility at Tufts University, at Baylor University, and at the Presidio, California, facility that ARS took over from the Army. Referring to the Tufts center, Kinney quipped, "We don't like the idea of having a \$26-million facility in downtown Boston and no one in it." Without being specific about funds, he noted that ARS operates a total of five nutrition laboratories, "and we're going to take advantage of increasing the funding to coordinate and integrate those programs."

In response to a question about the elimination of organic farming research programs—a Carter-era in-

heritance that the Reagan Administration regarded with scorn—Kinney said the real problem was in the difficulty of "defining organic farming." A great deal of the research conducted by ARS, he said, is applicable to organic farming, regardless of labels. Stating that "I sympathize with the people interested in organic farming," Kinney said, "We could go through the ARS budget and pull out millions of dollars that relate directly to organic farming."

Asked whether "the average farmer will be able to see any significant difference in his own area" as a result of the new research plan, Kinney replied, "I don't think it will be obvious to the average farmer. We're not going to make dramatic changes that will be damaging to farmers in any locality." Any major changes, he continued, would be carried out in collaboration with farmers, the land-grant universities, and industry.

Will the ARS plan actually amount to anything more than a reshuffling of relatively minor sums? If the entrenched constituents of agricultural research have their way—as they traditionally have—the answer is no. But, ag research is under unusually heavy pressure as a result of hard times on the farm and a rising political interest in the relationship between research and economic well-being. The reformers have many more friends than in the past, and that could make a big difference.—DSG

No Santa, High-Energy Chieftains are Warned

In a letter that doesn't conceal the exasperation that Washington's science-policy makers feel toward the warring tribes of high-energy physics, the Department of Energy's research chief tells them that they had better sort out their priorities because they can't have it all.

Written by Alvin W. Trivelpiece, Director of DOE's Office of Energy Research, the letter is specifically addressed to Jack Sandweiss, the Yale physicist who chairs the DOE High Energy Physics Advisory Panel (HEPAP). But it's clearly directed to a scientific leadership that's adamantly clinging to its big-spending hopes, particularly the benighted Isabelle project at the Brookhaven National Laboratory.

What makes the situation especially irritating for the Reagan Administration's science chiefs is that they have been quite sensitive to the financial strains in high-energy physics, and have succeeded, in a difficult budgetary atmosphere, in obtaining substantial increases over the spending level they inherited from the Carter Administration. For the coming fiscal year, the Reagan budget proposes a \$68-million in-

crease, to a record total of \$490 million—a jump that merits gratitude, rather than griping, in the view of the Administration's science-policy aides.

Trivelpiece's letter, dated January 27, observes that "the present debate on directions and distribution of resources within the high-energy physics community is taking on some unhealthy characteristics that have the potential for making the situation worse for all concerned. I am only too well aware of the budgetary problems that this and other science programs are facing, and I am sympathetic with the frustrations that have led to the acrimony and quasi-lobbying efforts of some of the high-energy physics community. However, these efforts are not helping to resolve the problems, and I would ask you, through HEPAP, to encourage a more restrained and statesmanlike approach by all members of the community."

The letter goes on to request that the panel "develop a charge letter for the 1983 New Facilities Subpanel that makes it clear that what is needed at this time are unequivocal recommendations on the

(Continued on page 4)

Book on Scientific Fraud Irks the Elders

The elders of the scientific community are manifesting one of those periodic spasms of sanctimonious indignation that afflicts them whenever outsiders have the temerity to suggest that a divergence exists between science and saintliness.

In this instance, their wrath arises from a new book, "Betrayers of the Truth: Fraud and Deceit in the Halls of Science," (Simon and Schuster) which contends that considerably more fudging of scientific research goes on than might appear from the relatively few cases that come to light. Written by two highly respected science journalists, William Broad and Nicholas Wade, both of the *New York Times*, the book argues that competitive pressures have become so intense that corner-cutting and worse are no rarity in the modern lab. Furthermore, they insist—offering case studies as evidence—sciences' claims of rigorous self-policing simply do not bear scrutiny. As they point out, most fakers who get caught were tripped up by foolish errors or arrogant overconfidence, rather than by the careful checking of skeptical colleagues. (See SGR Vol. XII, No. 19 for excerpts from the book.)

The science establishment is gagging on that thesis. The magazine *Science* 83, published by the American Association for the Advancement of Science, responded with an unusual duo of put-down reviews, one by a scientist, the other by a non-scientist. That's balance, of a sort, it must be admitted. (The magazine's editor suspects "hostility" as the reason for six Nobel laureates and three other scientists declining to review the book.) And Robert K. Merton, the noted sociologist of science, recently advised against buying the book—"because that would support the authors." Merton, however, demonstrated his fealty to the competition of ideas by suggesting that the curious might resort to a lending library.

What's odd about this foaming at the intellect is that co-authors Broad and Wade performed their research—and earned their journalistic reputations—while in the employ of the preeminent establishment journal of the scientific community, *Science*, also published by the AAAS. It was from there that they were hired by the upright *New York Times*—Broad as a science reporter and Wade as an editorial writer.

Not at all odd or surprising, however, is the intensity of the scientific community's reaction, because if it turns out that science cannot manage basic matters of intellectual integrity, many other matters that are now left to the scientific community's own judgment inevitably come under suspicion.

As things now stand, basic scientific research enjoys the fortunate combination of heavy government financing and extremely little government supervision. The ra-

tionale is that scientists are honorable folks, and the community, being harmoniously dedicated to the advancement of knowledge, simply wouldn't tolerate hanky-panky in the lab next door.

With the non-scientist world generally accepting this view of scientific integrity, science has been accorded a rare degree of sovereignty in the management of its internal affairs. Thus, the leaders of research have fought off animal-warfare laws as needless interference. They beat back attempts at federal regulation of genetic-engineering research, and science operates under perhaps the least onerous accounting requirements of any recipients of federal support, regardless of the howls that periodically arise over Circular A-21 of the Office of Management and Budget. The whole system is based on a claim of trustworthiness that would evoke laughter if it were asserted by any other segment of society.

Now comes "Betrayers of the Truth," contending that sciences' proudly claimed internal safeguards—such as replication of experiments to detect fakery—are more myth than reality. In today's high-stakes competi-

(Continued on page 5)

HIGH ENERGY (Continued from page 3)

research program that will, in their opinion, make the most effective progress."

Finally, in an attempt to head off the venerable advisory tactic of saying we could do it all if we had the money, Trivelpiece offered the following caution:

"Whatever the outcome of your deliberations, I hope that you will not deliver up 'soft' recommendations at the end of this process. By that I mean that it will not be particularly useful to have recommendations that we could do thus and so if we just had so much funding. What are the most important high-energy physics facilities for the United States to have," the letter asks, "regardless of where they might go or how much they might cost? What are the elements of a balanced high-energy physics research program that will ensure continued progress in experiment, theory, and the associated advanced technology? These are the kinds of questions that the Subpanel and HEPAP will have to consider in making their recommendations," Trivelpiece concluded.

What must be noted about this latest chapter in high-energy politics is that the reserves of patience in White House science-policy and budgetary circles are running low. The preference is for the high-energy physicists to sort out their priorities. One gets the impression, however, that if they don't get them settled at a summit meeting scheduled for Woods Hole this summer, it will be done for them in Washington.

Researcher in Fraud Case to be Barred from Grants

A scientific version of defrocking was announced last month by the Department of Health and Human Services in the case of a physician accused of fabricating data while working on a federal research contract in a hospital laboratory associated with Harvard Medical School.

The accused, John R. Darsee, a former research fellow in the cardiac research laboratory at the Brigham and Women's Hospital, is the object of "proceedings to debar" him from further eligibility for government research funding, according to an announcement from the Department of Health and Human Services. In addition, he's been excluded for 10 years from service on NIH peer-review and advisory committees.

According to an announcement from the Department, Darsee "fabricated research findings while working on a study funded by" the National Heart, Lung, and Blood Institute. The case was investigated by a panel of academic cardiologists chaired by Howard E. Morgan, of the Pennsylvania State University College of Medicine.

The HHS announcement added that the Department had declined the hospital's offer to repeat Darsee's portion of a study on animal models for evaluating the efficacy of drugs for limiting muscle damage in heart attacks, and that the hospital will be asked to return \$122,371 "awarded for its portion of the study."

...Authors Say Detection is Actually Rare

(Continued from page 4)

tion for scientific glory and financial reward, the authors assert, there is little or no profit in repeating someone else's experiment. There can be a great deal of profit, however, in beating the competition to publication of results, even if some of the data are from the world of make-believe. And the chances of getting caught, they suggest, are actually quite small.

Is the thesis of scientific fraud as a major problem a far-fetched exaggeration of a minor and manageable aberration? The subject, by its very nature, defies accurate measurement. But, from the whispers that can be heard in the chambers of science, cheating is not as rare as the mandarins of science contend. Blockbuster

episodes are almost surely few and far between, but it is not unlikely that a good deal of low-level intellectual chiseling is taken in stride in the day-to-day workings of science.

What's amusing, as well as disturbing, are those recurring cases in which senior luminaries happily affix their own names to papers based on the work of subordinates—and then plead ignorance when discrepancies, or worse, come to light.

The scientific community would be better served if its representatives answered this provocative book with reason and facts. Too many certified cases of fraud have recently come to light for the public to be satisfied with assurances that everything is just fine.—DSG

In Print

A Patron for Pure Science: The National Science Foundation's Formative Years, 1945-57, by J. Merton England, NSF's staff historian, provides a detailed account of the Foundation's difficult birth and frail infancy as a tiny, conceptually unique government agency. Merton tells the story in a clear, straightforward way, but with an abundance of bureaucratic detail that may be daunting for all but the most affectionate students of NSF's affair. (351 pages, plus appendices, notes, glossary, etc.; single copies of paperback edition available without charge from National Science Foundation, Publications Office, Room 232, Washington, DC 20550; tel. 202/357-7861. Specify NSF publication No. 82-24.)

Science Policy from Ford to Reagan: Change and Continuity, by Claude E. Barfield, a journalist and former Department of Housing and Urban Development research administrator who served as co-director of Jimmy Carter's President's Commission for a Na-

tional Agenda for the Eighties. For a one-volume account of federal science-policy affairs from Ford to the beginning of the present Administration, Barfield's book is excellent. It concludes with several sensible recommendations, among them a call for an examination of the implications of the "reemergence of the Department of Defense as the single most important federal R&D support agency." (119 pages, plus appendices; \$5.95 per copy, from the publisher, the American Enterprise Institute for Public Policy Research, 1150 17th St. Nw., Washington, DC 20036.)

Security Study Expanded

The inter-agency study that the White House has ordered on the application of export controls to scientific and technical data has been thrown into confusion by a directive to cover all research-related activities, not just those financed by the federal government. The study was due March 1; completion date is now uncertain.

Industry Giving Big Bucks to Academic R&D

Industry is providing more money for academic research than is generally recognized, but "has neither the resources nor the intention to compensate for any substantial cuts in publicly funded academic research."

That's one of the major conclusions in a report on *University-Industry Research Relationships* by the National Science Board, the policymaking body of the National Science Foundation. The report, subtitled *Myths, Realities and Potentials*, notes that a 3-4-percent range has been widely estimated as industry's contribution to university-based research. But, the Board states, even with gaps in the data, "it is not unreasonable to estimate that the current corporate contribution is in the neighborhood of 6-7-percent of the total academic R&D." In 1980-81, the Board notes, this amounted to \$400-\$450 million.

The 6-7-percent estimate, the report explains, takes into consideration gifts and loans of scientific equipment, unreported support going to major universities, corporate gifts routed through foundations, and unrestricted corporate gifts that are used for R&D activities and student support.

The industrial sums, the Board reports, has increased steadily over the past decade—a trend that it describes as "remarkable considering the several major downturns in the business climate during this period."

"Having said this," the report adds, "it remains a fact of life that should corporate contributions to academic research double or even treble, they would still support only a small portion of the total academic research effort, and such support would be concentrated only in selected fields...The implication is clear: if the present level of academic research is to be maintained, the principal burden will continue to fall upon the public purse, both federal and state governments."

(*University-Industry Research Relationships*, 32 pages, single copies available without charge from the National Science Board, NSF, 1800 G St. Nw., Washington, DC 20550.)

New Smithsonian TV Series

The James S. McDonnell Foundation, of St. Louis, has granted \$3.5 million to the Smithsonian Institution and Washington-area WETA-TV for the production of seven one-hour programs for national public television.

According to Smithsonian Secretary S. Dillon Ripley, the series, titled "Smithsonian World," will make use of the Institution's resources in science, history, and the arts, and it is also planned to range afield to explore these areas. The Executive Producer for the series is Martin Carr, who produced several prize-winning documentaries for commercial TV. The first of the series is expected to go on the air early next year.

Shall We Dance?

"A striking finding...is that the initial impulse in the majority of the sampling of university-industry research relationships came from the university. At first glance, this would seem a rather one-sided relationship. Yet closer scrutiny reveals that a significant proportion of the academic researchers pursuing these relationships had prior consulting or other employment relationships with companies. If consulting relationships are generally initiated by companies, we have a multi-stage series of relationships: company wants technical/scientific advice (general or specific) and seeks out professor; professor-consultant sees opportunity for research and initiates research relationship; company tracks and (maybe) utilizes the research and makes employment offer to the bright graduate students and post-doctorates working on the project; the cycle is repeated in future years. Another loop in the relationship is traced by corporate philanthropy to departments and individual faculty, which may be initiated by either party."

—From *University-Industry Research Relationships*.

NAS Awards \$70,000 Prize

The big cash prize in the National Academy of Sciences' well-stocked prize repertoire—the \$70,000 Richard Lounsbery Award—will be awarded this year to Gunter Blobel, Professor of Cell Biology at Rockefeller University.

Established in 1978 by the Richard Lounsbery Foundation to recognize achievements in biological and medical research by young French and American scientists, the award—a \$50,000 prize plus \$20,000 for scholarly expenses, plus a medal—rotates annually between the two countries.

The presentation, along with a flock of other prizes administered by the Academy, will be made April 25 during the Academy's 120th annual meeting.

Robert White to Head NAE

Robert White, Director of the National Center for Atmospheric Research, has been named the shoo-in nominee for the presidency of the National Academy of Engineering. White would succeed Courtland Perkins, who is retiring in June.

Dept. of Education Science Role Assailed

The following is from testimony February 16 by Bill G. Aldridge, Executive Director of the National Science Teachers Association, before the House Science and Technology Committee, concerning an Administrative proposal to give the Department of Education a major role in science education:

...we in science education continue to believe firmly that the original reasons for lodging science education programs at NSF are still valid and important:

We must develop science and mathematics education materials and train our teachers in a partnership with those scientists who create the knowledge.

That knowledge, and the methods used by scientists to acquire new knowledge, are constantly changing. Science and mathematics teachers need direct, cooperative relationships with scientists and mathematicians, and involvement of research scientists in science education is essential. There are other compelling reasons why such programs should not be administered at the Department of Education and should, instead, be placed at NSF. The NSF is a small independent agency with a reputation for administering programs of very high quality selected *on merit*, with a minimum of political interference.

The Department of Education is well-known as an enormous bureaucracy, where awards are too often granted as allocations or entitlements, and where political factors play far too great a role in funding decisions. It is especially distressing that the present Administration has permitted the advisory and management components of the Department of Education to become politicized, and not just with members of their own party, or with conservatives, which would be understandable. But allowing the agency to become politicized with ideologues of the far right who often lack even the most basic education or experience relevant to the job requirements is very destructive of fair, proper, and efficient administration of government programs. The NSF has, for the most part, been able to retain its status as an independent agency. Also, the scientific community would never permit NSF to be politicized like the Department of Education.

Even though the National Science Board has been slow to respond to the present crisis, as indicated by the lack of NSF initiatives, scientists at universities and in the private sector, as well as those at the AAAS and the National Academy of Sciences, have shown great interest and concern. Many of these persons are actively working to improve the situation.

The NSF course development projects of the 60's were excellent *for their purpose*. They developed courses, materials, and labs to prepare persons who would become research scientists and engineers. Until

they became *obsolete*—which they did about ten years ago—these courses were excellent. But what has evolved into essentially all existing physics, chemistry, earth science, and biology courses and texts are now (1) obsolete and (2) inappropriate to the needs of the vast majority of students.

Honors for Teacher "Heroes"

A bit has come out about the Administration's plans to project some presidential glory on the down-trodden job of science and math teaching in the nation's elementary and secondary schools.

In testimony February 18 before the Senate Budget Committee, White House Science Adviser George Keyworth, citing what he described as an opportunity for "high leverage," described plans "to have each state of the union select top representatives of the pre-college science- and math-teaching community. And to reward them, if you wish, to make heroes of them, and bring them to Washington, bring them to the White House. The President would personally receive them, and present them to the American people, and give them an award, which they could take back to their institutions and purchase computers or other teaching tools, according to their own choice," Keyworth said.

The object, he continued, is "recognition, making heroes of critical members of our society."

Keyworth added that NSF and the Department of Education would be taking more substantial steps toward resuscitating science education. Finally, he observed that success in helping the heroes also depended on "compensating them commensurate with our reliance on them."

Subscription Form

Science & Government Report
Northwest Station
Box 6226A
Washington, D.C. 20015

☐ Renew my subscription; ☐ Check enclosed

☐ Enter my subscription; ☐ Please bill

Institutional subscribers: one year, \$132.50 ☐; two years, \$235.00 ☐

(Overseas airmail, \$25.00 per year additional.)

Name

Address

Zip

Proxmire Sees Excessive Reverence for R&D

With the Republicans in control of the Senate, and the Reagan White House even more nit-picking about federal spending than he is, Senator William Proxmire (D-Wis.) has been receiving little attention over the past couple of years for his once-celebrated Golden Fleece Awards.

Regardless of a fickle press, however, the Senator not only carries on with his monthly ridicule of alleged federal wastefulness, but he has now offered a defense of the award as an antidote to an "overdone...reverential awe in which we hold research."

Writing in a newspaper column that he distributes from his office, Proxmire observes that the award "has particularly provoked resentment from some in the scientific research community, although I have rarely awarded the Golden Fleece for scientific research." (Not mentioned by the Senator was that a Golden Fleece for research in 1975 eventually cost him \$10,000 in an out-of-court settlement of an \$8-million libel suit, plus \$124,351 in legal fees that he's slowly repaying the US Senate from book royalties.)

In any case, though he has gone lightly on science-related topics, the Senator continues, "some charge that I have ridiculed and demeaned sincere research, that I have demagogically exploited situations where tens of thousands or hundreds of thousands of dollars have been spent on what superficially seemed to be ridiculous inquiries, such as how long it takes to cook breakfast—the cost of the study: \$30,000—and why

some drivers stop and honk and hoot and holler when they see a young woman on the street on a cold day in Indiana clothed only in a skimpy bikini—another scientific experiment conducted at a cost of thousands of taxpayer dollars.

"We have great respect for research in this country," Proxmire observes, "and we certainly should have. After all, research is very largely responsible for the rich and abundant material life we Americans live. But we can overdo anything, and I think we have on occasion overdone the reverential awe in which we hold research. I have found that when someone says the word 'research' in the Senate, members virtually stand up and salute."

As for the targets of his scorn, the Senator credits them with ample capacity for self-defense. "Are these researchers poor, ignorant people? Are you kidding? They are universally intelligent, articulate and specially well-informed in their own disciplines. They are well-equipped to defend themselves. And they do. The Golden Fleece constitutes one way we can provoke a debate on spending that appears to be wasteful and require those who spend the money to stand up and defend their doing so. What's wrong with that?"

For all that, Proxmire has lately been dealing in pretty tame stuff. Last month's award went to the General Services Administration for allegedly wasting \$1.5 million on renovation of a train station in Tennessee.

Science & Government Report
Northwest Station
Box 6226A
Washington, D.C. 20015

Second class postage paid
at Washington, D.C.

Xerox-University Microfilms
300 N. Zeeb Rd
Ann Arbor

MI 48106

9999

